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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NAGARAJAN SUBRAMANIYAN

Appeal 2009-002485
Application 10/687,189
Technology Center 2400

Decided: February 9, 2010

Before JOSEPH F. RUGGIERO, CARLA M. KRIVAK, and
THOMAS S. HAHN, *Administrative Patent Judges*.

RUGGIERO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Final Rejection of claims 1-24, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Brief (filed July 23, 2007), the Answer (mailed November 2, 2007), and the Reply Brief (filed January 2, 2008) for the respective details. Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Appellant's Invention

Appellant's invention relates to optimizing a network connection between first and second devices in which the first device includes a first packet protocol and a second packet protocol. The first packet protocol includes a connection setup portion and the second packet protocol includes a data transfer portion. The network connection is initiated from the first device to the second device using the first packet protocol. Upon receipt of an acknowledgement from the second device, a data transfer is initiated between the first and second devices using the second packet protocol. (*See generally* Spec. ¶¶ [0032]-[0033]).

Claim 1 is illustrative of the invention and reads as follows:

1. A method for establishing a connection between a first device and a second device, said first device comprising a first protocol driver, a first application, a first socket layer disposed between said first protocol driver

and said first application, and a first NIC driver, said second device comprising a second NIC driver, said method comprising:

- providing a first filter between said first socket layer and said first protocol driver, said first filter being external to said first NIC driver and first NIC hardware that is driven by said first NIC driver;
- providing a first offload hardware in said first device;
- providing a second filter in said second device;
- receiving, using said first filter, a request from said first application through said first socket layer;
- examining, using said first filter, a transport handle in said request to determine whether said connection is an offload connection;
- processing said request to produce a packet set, said processing being performed by said first offload hardware if said connection is an offload connection, said processing being performed by said first protocol driver if said connection is not said offload connection, said packet set including one or more ordered packets;
- sending, using said first NIC driver and said first NIC hardware, said packet set to said second device;
- determining, using said second NIC driver, whether said packet set contains an offload transport handle; and
- passing said packet set to said second filter if said packet set contains said offload transport handle.

The Examiner's Rejections

The Examiner's Answer cites the following prior art references:

Boucher	US 6,247,060 B1	Jun. 12, 2001
Anand	US 2002/0062333 A1	May 23, 2002

Claims 1-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Boucher and Anand.

ISSUES

The pivotal issues before us are whether Appellant has demonstrated that the Examiner erred in determining that Anand teaches:

- a) the examination of a transport handle in a request to determine whether a device connection is an offload connection, and
- b) that processing can be performed on a request from a sending application.

FINDINGS OF FACT

The record supports the following relevant findings of fact (FF) by a preponderance of the evidence:

1. Boucher discloses (Fig. 23; col. 20, ll. 10-35; col. 53, ll. 19-47) the establishment of a connection between first and second devices which include offload processing hardware and filters between the socket layers and the protocol drivers.

2. Anand discloses (Figs. 1, 4; ¶ [0056]) a system for offloading processing tasks to hardware in which a pointer in the task offload data field of a packet extension is examined to further define how tasks are to be carried out.

3. Anand further discloses (¶ [0070]) that a determination can be made as to whether to offload computing tasks to hardware or process tasks conventionally by software processing depending, for example, on whether computer processing overhead is low at a particular point in time.

4. Also disclosed by Anand (¶ [0053]) is a driver 116 that performs whatever functional tasks are requested by the contents of the packet extension of a data packet.

PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (stating that 35 U.S.C. § 103 leads to three basic factual inquiries: the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art). Furthermore,

“there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

ANALYSIS

With respect to each of the appealed independent claims 1 and 13, Appellant’s arguments do not attack the Examiner’s basis for the proposed combination of Boucher and Anand but, rather, are initially directed to the alleged deficiencies of either Boucher or Anand in disclosing the examination of a transport handle in a request to determine whether a device connection is an offload connection. Appellant’s arguments in the main Brief (pages 9-10) focus on the deficiencies of Boucher in disclosing a transport handle, such as a unique identifier or pointer used to access an object in a request, which is examined.

We do not find Appellant's arguments to be persuasive of any error in the Examiner's stated position. It is noteworthy that, while Appellant's transport handle argument is directed to the Boucher reference, the Examiner has actually relied upon Anand as teaching the transport handle examination feature. We agree with the Examiner (Ans. 10-11) that an ordinarily skilled artisan would recognize Anand's examination of a pointer in the task offload data field of the packet extension 150 (FF 2) as corresponding to the claimed transport handle examination feature.

In several related arguments, presented at pages 9-10 of the Reply Brief, Appellant contends, initially, that Anand merely *recognizes* that a packet extension contains a task offload field but does not *determine* that a transmitted packet contains a packet extension. Secondly, Appellant argues that Anand does not disclose that the packet extension will trigger the passing of the data packet to a second device filter.

These arguments, however, were raised for the first time on appeal in the Reply Brief and are therefore deemed to be waived. *See Optivus Tech., Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (“[A]n issue not raised by an appellant in its opening brief . . . is waived.” (citation omitted) (internal quotation marks omitted)); *see also Ex parte Scholl*, No. 2007-3653, slip op. at 18-19 & n.13 (BPAI Mar. 13, 2008) (informative), *available at* <http://www.uspto.gov/web/offices/dcom/bpai/its/fd073653.pdf>. Further, although we consider these arguments to be waived, we make the observation that, since Anand discloses (FF 3) the determination of whether to offload computing tasks to hardware or process tasks conventionally by software processing, such determination would require an initial

determination that a transmitted data packet actually contains an offload packet extension. We also note that the Examiner (Ans. 5) has relied upon Boucher, not Anand, for teaching passing packets from a first device filter to a second device filter.

Lastly, we find to be unpersuasive Appellant's argument (App. Br. 10) that Anand discloses only that offload processing tasks can be performed on a *packet* from a sending application, and not that processing can be performed on a *request* from the sending application as claimed. As discussed by the Examiner (Ans. 11), since Anand discloses (FF 4) that driver 116 performs whatever functional tasks are *requested* by the contents of the packet extension, it is self-evident that such packet extension contains *requests* for processing. We also agree with the Examiner (Ans. 11) that Anand discloses (§¶ [0075]-[0078]) that a processed packet set will include "one or more ordered packets" as claimed.

For the above reasons, since Appellant has not demonstrated any error in the Examiner's determination of obviousness based on the teachings of Boucher and Anand, the Examiner's 35 U.S.C. § 103(a) rejection of independent claims 1 and 13, as well as dependent claims 2-12 and 14-24 not separately argued by Appellant, is sustained.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that Appellant has not shown that the Examiner erred in rejecting appealed claims 1-24 for obviousness under 35 U.S.C. § 103.

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DECISION

The Examiner's 35 U.S.C. § 103 rejection of claims 1-24, all of the appealed claims, is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

babc

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